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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,652	11/16/2001	David J. Green	0325.00488	2156

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CHRISTOPHER P. MAIORANA, P.C.
24840 HARPER
ST. CLAIR SHORES, MI 48080

EXAMINER	
EHICHIOYA, FRED I	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,652	GREEN ET AL.	
	Examiner	Art Unit	
	Fred I. Ehichioya	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 10, and 21 - 33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 10, and 21 - 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SHAHID ALAM
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicants' arguments, with respect to claims rejections under 35 U.S.C. 112 with respect to Claims 23, 24, 27 and 29 have been fully considered and are persuasive. Therefore, the rejection under 35 U.S.C. 112 of last Office Action has been withdrawn.

However, claims 23, 25, 27 and 29 are objected to.

Claim Objection - 35 CFR 1.75(c)

2. Claims 23, 25, 27 and 29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 23, 25, 27 and 29 are presented before claims 33, 32 and 31 but depend from these claims respectively. Therefore claims 23, 25, 27 and 29 fail to limit the subject matter of previous claims.

3. The indicated allowability of claims 24 – 28 is withdrawn in view of the newly discovered reference(s) to reject these claims. Rejections based on the newly cited reference(s) follow.

4. Applicants' arguments, with respect to claims 1 – 10, and 21 - 33 filed September 22, 2004 have been fully considered but they are not persuasive for the following reasons.

5. Applicants argue:

(a). "Nowhere in the above text does Tang appear to teach or suggest a step for generating a programming item from a plurality of parameters that define a program for said programmable logic device" (Page 11, paragraph 1).

(b). "Nowhere in the above text does Tang appear to teach or suggest a step for compressing said programming item to present a compressed item" (Page 11, paragraph 2).

(c). "Nowhere in the above text does Tang appear to teach or suggest a step for storing said programming item in a programming field of said file in response to generating the programming item" (page 12, paragraph 2).

(d). "Nowhere in the above text does Kucukcakar appear to teach or suggest a non-programming field of a file" (page 13, paragraph 2).

(e) prima facie obviousness has not been established (page 13, paragraph 3).

(f). the references appear to be non-analogous art and thus the proposed combination is not obvious (page 13, paragraph 4).

Regarding argument (a), Examiner respectfully disagrees with the applicants. Applicants Admitted Prior Art (hereinafter "APA") as applied herein in this Office Action

discloses generating a programming item from a plurality of parameters that define a program for said programmable logic device (see specification page 2, lines 3 – 6).

Regarding argument (b), Examiner respectfully disagrees with the applicants. Kalkstein discloses compressing said programming item to present a compressed item (see column 3, lines 53 – 55).

Regarding argument (c), Examiner respectfully disagrees with the applicants. APA discloses storing said programming item in a programming field of said file in response to generating the programming item (see specification page 6, lines 6 – 7).

Regarding argument (d), Examiner respectfully disagrees with the applicants. APA discloses a non-programming field of a file (see specification page 2, lines 7 – 9).

Regarding argument (e), Examiner respectfully disagrees with the applicants. MPEP §2124 requires "Exception to the rule that the critical reference date must precede the filing data" and does not have anything to do with "suggestion or motivation to modify the references". There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teaching of the prior art, and the knowledge of persons of ordinary skill in the art. MPEP §2143.01. *In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 –58.* Regarding page 4, of the last Office Action, the motivation fairly outlines the nature of the problems to be solved when Tang and Kucukcakar are combined i.e., the stored programmable and non-programmable datapath receive data from databus, provide functional operations on the data, and transfer data back to the data bus wherein the operations such as arithmetic operations, data increments/decrements, data shifting, and logical comparisons take place.

Regarding argument (f), Examiner respectfully disagrees with the applicants. Though these inventions are in different classifications, they are reasonably pertinent to the particular problem with which the applicants' were concerned *(In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir.1992).*

Examiner wishes to also point out that Kalkstein discloses generating a dictionary for compressing as claimed (see column 11, lines 47 – 67) mapping symbol representation as claimed (see column 2, lines 28 – 32); and Standley discloses adding a plurality of delimiters as claimed (see column 3, line 50 – column 4, line 5).

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Co-pending application No. 09/916,453. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, using varying terminology.

The difference between claim 1 of '453 application and instant claim is that claim 1 does not recite the term "compressing said programming item to present a compressed item".

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to exclude the term "compressing said programming item to present a compressed item" because the person would have realized that the remaining elements would have performed the same functions as before. "Omission of element and its function in combination is obvious expedient if the remaining elements perform same functions as before." See In re Karlson (CCPA) 136 USPQ 184, decide Jan 16, 1963, Appl. No. 6857, U.S. Court of Customs and Patent Appeals.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1 - 7, 22, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Applicants' Admitted Prior Art (hereinafter "APA") in view of U.S. Patent 6,121,903 issued to Nir Kalkstein (hereinafter "Kalkstein").

Regarding claims 1 and 30, APA teaches a method of generating a file suitable for programming a programmable logic device, the method comprising the steps of:

A) generating a programming item from a plurality of parameters that define a program for said programmable logic device (see page 2, lines 3 - 6);

(C) storing said programming item in a programming field of said file in response to generating (see page 2, lines 6 - 7); and

(D) storing said "non-programmable type information" in a non-programming field of said file in response to compressing (see page, lines 7 – 9; non-programming type information" is translated as "compressed item").

APA does not explicitly teach Compressed item as claimed and (B) compressing said programming item to present a compressed item.

Kalkstein teaches compressed items (see column 4, lines 35 – 49); and

(B) compressing said programming item to present a compressed item (see column 3, lines 53 - 55).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Kalkstein's teaching of "compressing said programming item to present a compressed item" would have allowed APA's system an improved implementation of the Huffman encoding, thereby gaining a significant increase of speed in exchange for slight or negligible degradation of the compression capacity.

Further, APA's system will have an improved encoding scheme which provides for achieving better compression as suggested by Kalkstein at column 6, lines 45 - 50.

Regarding claim 2, APA teaches the step of storing at least one of said parameters in a second non-programming field of said file (see page 2, lines 7 – 9; APA discloses storing said "non-programmable type information" in non-programming fields. It is inherent that since APA discloses non-programming fields, the "non-programmable type information" that are translated as "parameters" are stored in a second of these non-programming fields).

Regarding claim 3, Kalkstein teaches the step of generating a dictionary for compressing prior to compressing said programming item (see column 11, lines 47 - 50).

Regarding claim 4, Kalkstein teaches wherein said dictionary is generated independently of said compressing step (see column 15, lines 61 - 65).

Regarding claim 5, Kalkstein teaches said compressing is a Huffman encoding and said dictionary is a Huffman tree (see column 12, lines 6 - 27).

Regarding claim 6, Kalkstein teaches the step of encoding said compressed item from a binary representation to a symbol representation in response to compressing (see column 2, lines 28 - 32).

Regarding claim 7, Kalkstein teaches the step of mapping said symbol representation to a character representation in response to encoding (see column 2, lines 28 - 32).

Regarding claim 22, APA teaches said file is compatible with a Joint Electron Device Engineering Council JESD3-C standard (see page 1, lines 14 - 16).

9. Claims 8, 9, 10, 27 and 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kalkstein and further in view of U.S. Patent 5,090,015 issued to Ezzat A. Dabbish et al (hereafter "Dabbish").

Regarding claim 8, APA teaches second non-programming field as shown in claim 2.

APA or Kalkstein does not explicitly teach generating an error detection item; and storing said error detection item as claimed.

Dabbish teaches generating an error detection item (see column 1, lines 56 - 57); and

storing said error detection item (see column 2, lines 29 - 39) in a second non-programming field of said file (see APA: page 2, lines 7 – 9).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Dabbish's teaching of "storing said error detection item" would have allowed APA and

Kalkstein's system to provide a technique for verifying the integrity of the encrypted algorithm by self-checking it during programming, after completion of programming and prior to execution as suggested by Dabbish in column 1, lines 10 – 13.

Regarding claim 9, Dabbish teaches extracting error detection item from file (see column 1, lines 49 – 57).

Regarding claim 10, Dabbish teaches said steps (A) through (D) are stored in a storage medium as a computer program that is readable and executable by a computer to generate said file (see column 3, lines 60 - 63).

Regarding claim 27, Kalkstein teaches wherein said step of extracting said compressed item comprises the sub-step of parsing a plurality of first comment lines containing said compressed item from said file using a plurality of first delimiters (see column 5, lines 7 – 9).

Regarding claim 31, Kalkstein teaches extracting said compressed item from said file (see column 4, lines 35 – 41).

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kalkstein and further in view of U.S. Patent 5,396,595 issued to Benji J. Stanley (hereafter "Stanley").

Regarding claim 21, APA teaches second non-programming field as shown in claim 2.

APA or Kalkstein does not explicitly teach the step of adding plurality of delimiters around said compressed item in said non-programmable field.

Stanley teaches the step of adding plurality of delimiters around said compressed item in said non-programmable field (see column 3, line 50 – column 4, line 5).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Stanley's teaching of "adding plurality of delimiters around said compressed item" would have allowed APA and Kalkstein's system to provide a data compression and decompression method that combines both a variable-length and fixed-length encoding as suggested by Stanley in column 2, lines 10 – 12.

11. Claims 23, 24, 29, 32 and 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kalkstein and Dabbish and further in view of U.S. Patent 6,446,145 issued to David Har et al (hereafter "Har").

Regarding claim 32, APA, Kalkstein or Dabbish does not explicitly teach decompressing said compressed item to present a backup programming item.

Har teaches decompressing said compressed item to present a backup programming item (see column 5, lines 39 - 44).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Har's teaching of "decompressing said compressed item to present a backup programming item" would have allowed APA, Kalkstein and Dabbish's system to provide a data management mechanism in a compressed memory system that functions to minimize processor stall conditions due to cache write back queuing at the compressor as suggested by Har in column 4, lines 8 - 11.

Regarding claim 33, Har teaches validating said backup programming item with error detection item (see column 2, lines 3 – 7 and column 4, lines 34 - 42).

Regarding claim 23, Kalkstein teaches the step of extracting said programming item from said programmable field of said file (see column 4, lines 35 - 41).

Regarding claim 24, Har teaches the step of replacing said programming item with said backup programming item in response to validating said backup programming item (see column 2, lines 3 – 7 and column 4, lines 34 – 42)

Regarding claim 29, Dabbish teaches the step of repairing said error detection item in response to said backup programming item failing said validating step (see column 2, lines 45 – 59).

12. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kalkstein, Dabbish and Har and Stanley.

Regarding claim 25, APA, Kalkstein, Dabbish or Har does not explicitly teach wherein the step of decompressing said compressed item comprises the sub-step of mapping said compressed item from a character representation to symbol representation in response to extracting said compressed item.

Stanley teaches wherein the step of decompressing said compressed item comprises the sub-step of mapping said compressed item from a character representation to symbol representation in response to extracting said compressed item (see column 2, lines 59 – 67).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Stanley's teaching of "mapping said compressed item from a character representation

to symbol representation" would have allowed APA, Kalkstein, Dabbish and Har's system to provide a data compression and decompression method that combines both a variable-length and fixed-length encoding as suggested by Stanley in column 2, lines 10 – 12.

Regarding claim 26, Kalkstein teaches wherein the step of decompressing said compressed item further comprises the sub-step of parsing a plurality of first comments lines containing said compressed item from said file using a plurality of first delimiters (see column 5, lines 7 – 9)

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kalkstein and Dabbish and further in view of Stanley.

Regarding claim 28, Kalkstein and Dabbish teach wherein said step of extracting said error detection item comprises the sub-step of parsing at least one second comment line (see Kalkstein: column 5, lines 7 - 9) containing said error detection item from said file (see Dabbish: column 1, lines 56 – 57).

APA, Kalkstein or Dabbish does not explicitly teach using a plurality of second delimiters as claimed.

Stanley teaches using a plurality of second delimiters (see column 3, line 50 – column 4, line 5).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because

Stanley's teaching of "delimiters" would have allowed APA, Kalkstein and Dabbish's system to provide a data compression and decompression method that combines both a variable-length and fixed-length encoding as suggested by Stanley in column 2, lines 10 – 12.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 571-272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Patent Examiner
Art Unit 2162

April 28, 2005

SHAHID ALAM
PRIMARY EXAMINER